ABSTRACT:

Problem statement: Handwriting identification is the study for identifying or verifying the writer of a given handwritten document. Since the handwriting features are the cornerstone in the writers' classification process, the classifier accuracy is sensitive in terms of how the writers are scored based on the used features. Approach: In this study, we introduced swarm intelligence as a features weighting mechanism to differentiate between the features having high importance and those having low importance in the identification process. The weights obtained from the swarm experiments were used to adjust the features scores and then to identify the most important subset feature for the writers classification process. Results: The experiments results showed that a significance influence of the feature weights in the handwriting identification process. Conclusion: This communication investigated the influence of the feature importance in the handwriting identification process. Binary Particle Swarm Optimization (BPSO) is used as feature selection method and Euclidian Distance (ED) is used as an evaluation function for the BPSO. The BPSO is trained using 956 words of the off-line IAM data (English handwriting) to learn the feature weights. Each word is represented by 29 statistical features.